



富山から世界に
FROM TOYAMA TO THE WORLD

ELEVATOR TRACTION MACHINE AND CONTROLLER CABINET



ABOUT US

Nippon Sanyo Lift Associate Co., Ltd. is a company that aims to realize well-being through elevators as a bridge between Japan and the world, utilizing the knowledge and experience cultivated in Japan to create mutual benefit with the world.

Experts from various fields gather together, disseminate information from Toyama to the world, and propose lifestyles that are suitable for the future.



Legal Information Statement:

- ⌘ The product described in this documentation may be operated only by personnel qualified for the specific task in accordance with the relevant documentation.
- ⌘ All operations on the product must follow respective descriptions provided in the documentation, in particular, its warning notices and safety instructions.
- ⌘ Damage caused by improper use is not covered by warranty.
- ⌘ The company will disclaim any legal liability for any personal injury or property damage caused by improper usage.

MESSAGE FROM THE PRESIDENT



From Toyama to the world

As a company that supports social infrastructure, we will actively promote sales overseas with a global perspective of the technology and know-how cultivated by all our employees. By utilizing advanced information systems based on these product, system, and operational technologies, we will contribute to the realization of a safe, secure, and comfortable, sustainable society in space by solving social issues and providing new value

based on the perspective of each individual user. We also believe that it is necessary for our company to be able to change at all times. In an era of repeated paradigm shifts, we aim to be a company that can quickly respond to change and has flexibility and strength.

The fusion and combination of our knowledge, technology, and mechanisms from various different fields will play a role in promoting innovation for our customers by standing at the crossroads between countries and different fields, and will play a key role in connecting various industries. Our group will work together to achieve our management goals.

We aim to continue to be a company that provides peace of mind and safety to our customers and is happy together with the local community.

President and CEO Hiroyuki Hirata

At Nippon Sanyo Lift Associate, we pride ourselves on offering cutting-edge products backed by the latest technologies and a team of seasoned professionals with diverse perspectives. Our aim extends beyond borders as we aspire to broaden our sales reach to encompass countries and regions beyond Japan.

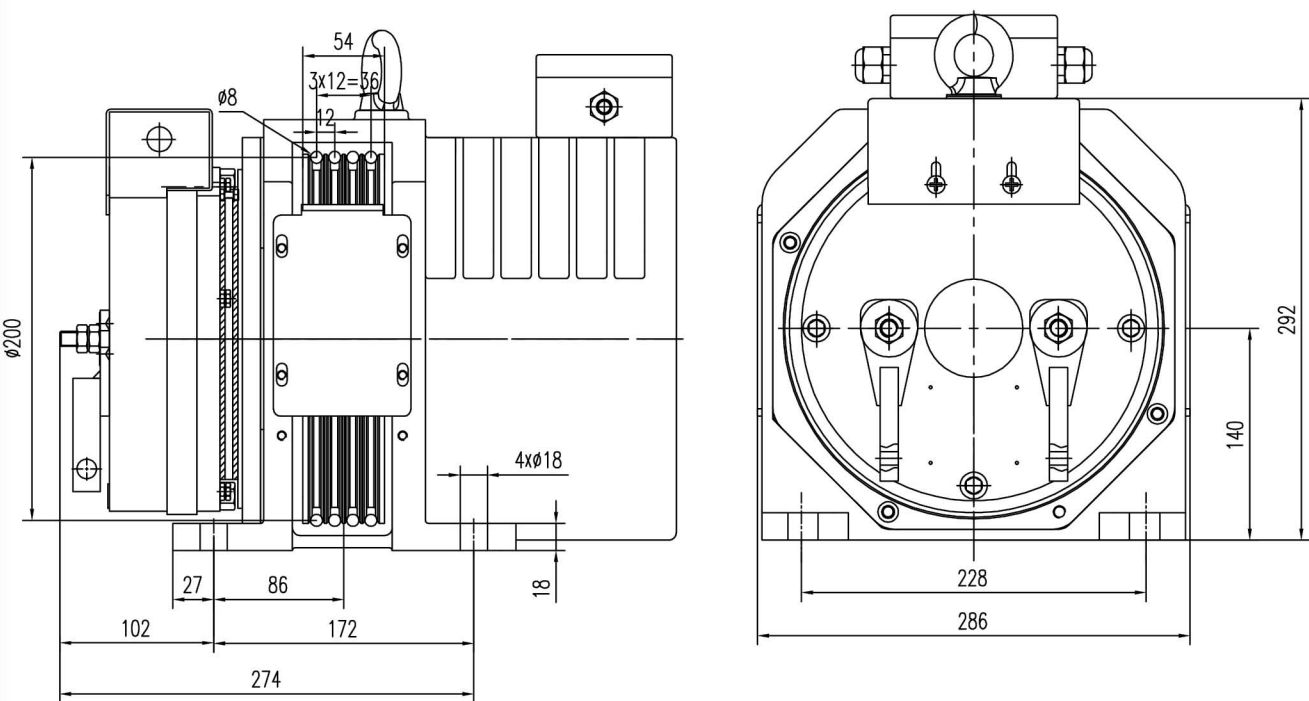
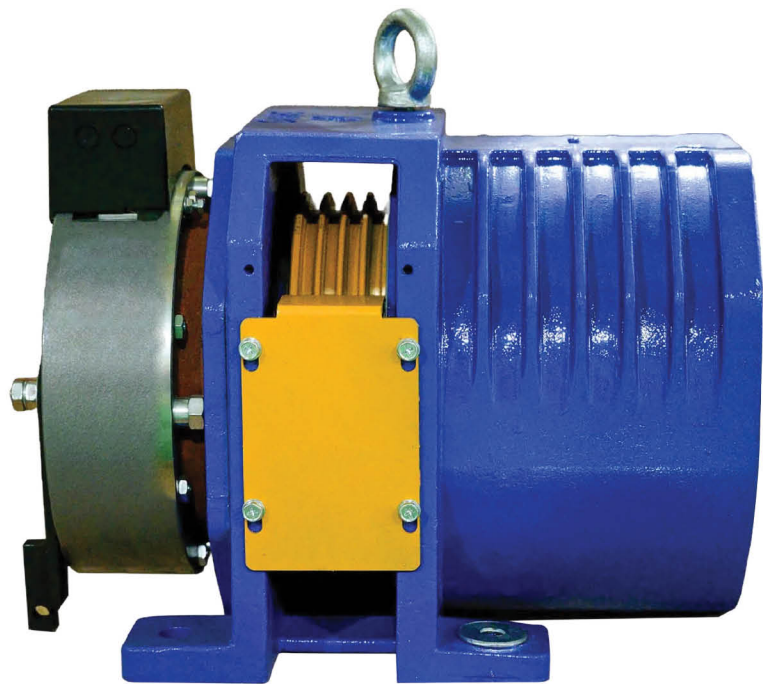
Our mission is clear: to contribute to the creation of a sustainable society that prioritizes safety, security, and comfort, all while delivering value from the user's perspective. Embracing the ethos of continual improvement, we recognize the need to adapt to evolving paradigms in an era of perpetual change.

Flexibility and resilience are paramount in our pursuit to be a company that swiftly responds to the dynamic landscape of business. By amalgamating our expertise, technologies, and systems across various domains, we position ourselves as a pivotal force in catalyzing customer innovation across borders and industries.

United as a team, we are committed to realizing our management objectives. Our dedication extends beyond our products; we vow to uphold our commitment to customer safety and peace of mind, fostering enduring relationships within the communities we serve.

President and CEO Hiroyuki Hirata

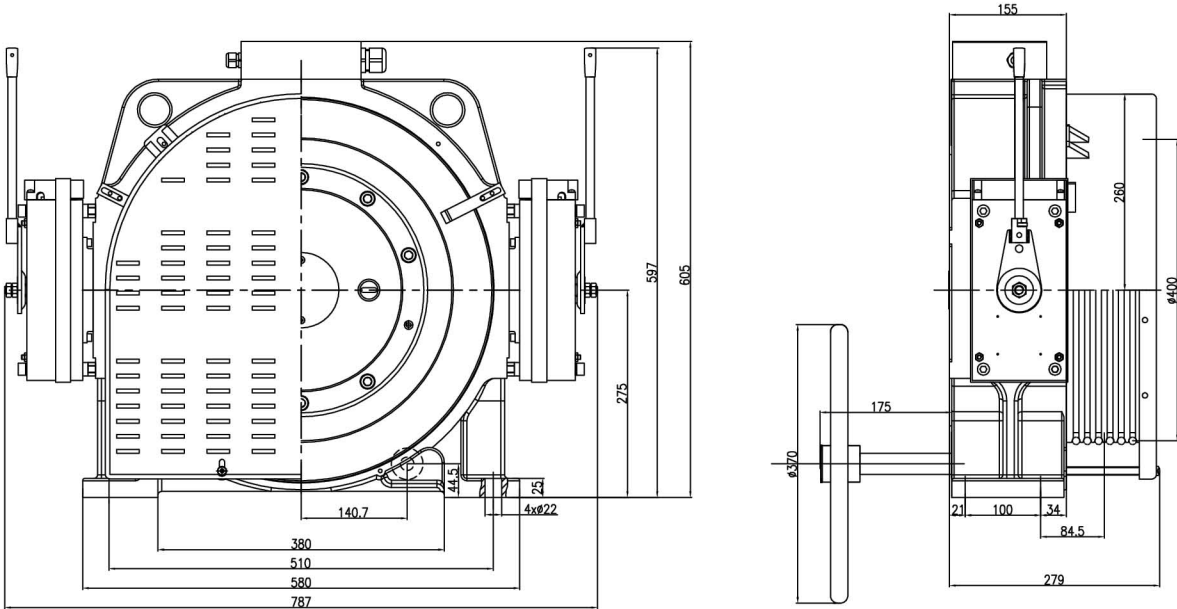
SYM-01 Series is widely used in home elevator,
restaurant elevator small load machine room-less passenger elevator.



■ TRACTION MACHINE PARAMETER		■ FEATURES	
• Capacity	450kg	• Structure design with small size, light weight, compact structure and superior performance.	
• Rated Voltage	220/380V	• Large starting torque, small current, running smoothly.	
• Roping	2:1	• Low vibration and noise, good comfort.	
• Max Able Load	1500kg	• The height of machine is shorter, save building space and make installation and maintenance more convenient.	
• Rated Speed	1.0m/s	• Adapt different inverters, position sensors.	
• Ins. Class	F		
• Traction machine pole	16		
• Rating	S5-25%		
• Brake Voltage	DC110V		

Load (kg)	Speed (m/s)	Roping	Motor Parameter						Brake Parameter				Sheave Parameter				
			Rated power (kw)	Rated Torque (N.m)	Rated Speed (RPM)	Rated Frequency (Hz)	Rated Current (A)		Current (A)	Voltage (V)	Rated power (W)	Braking Torque (N.m)	nxd (mm)	Diameter (mm)	Pitch (mm)	β	γ
							380V	220V									
450	1	2:1	3	150	191	25.5	9	17.1	1.78	DC110	196	≥450	4xØ8	200	12	95	30

SYM-01B series is SANYO standard PM gearless traction machine.
It is very cost-effective, and is a classic model with largest sale & owership volume.



■ TRACTION MACHINE PARAMETER		■ FEATURES	
• Capacity	630kg -1000kg	• Machine low speed operation smooth, with low noise and small vibration.	
• Rated Voltage	380V	• Use block type armless brake with high reliability.	
• Roping	2:1	• High power factor, with quick response time and high reliability	
• Max Able Load	3000kg	• Adapt different inverters, position sensors.	
• Rated Speed	1.0m/s - 2.0m/s	• Large loading capacity, suitable for the modernization of existing elevator	
• Ins. Class	F		
• Traction machine pole	32		
• Rating	S5-40%		
• Brake Voltage	DC110V		

Load (kg)	Speed (m/s)	Roping	Motor Parameter					Brake Parameter				Sheave Parameter				
			Rated power (kw)	Rated Torque (N.m)	Rated Speed (RPM)	Rated Frequency (Hz)	Rated Current (A)	Current (A)	Voltage (V)	Rated power (W)	Braking Torque (N.m)	nxd (mm)	Diameter (mm)	Pitch (mm)	β	γ
630	1	2:1	4.2	400	96	25.6	9.6	2x1.15	DC110	2x129	≥2x710	5xΦ8	400	12	95	30
	1.5		6		144	38.4	14.5									
	1.75		7		168	44.8	15.8									
800	1	2:1	5	510	96	25.6	12	2x1.15	DC110	2x129	≥2x710	5xΦ10	400	16	95	30
	1.5		7.8		144	38.4	18.5									
	1.75		9		168	44.8	21									
	2		10.2		189	50.4	25									
1000	1	2:1	6.4	640	96	25.6	15	2x1.15	DC110	2x129	≥2x850	5xΦ10	400	16	95	30
	1.5		9		144	38.4	22									
	1.75		11		168	44.8	26									
	2		13.5		189	50.4	31.5									

SYM-02B series is suitable for higher and bigger elevators, possible to generate bigger torque with low noise and vibration, provides comfortable rides.

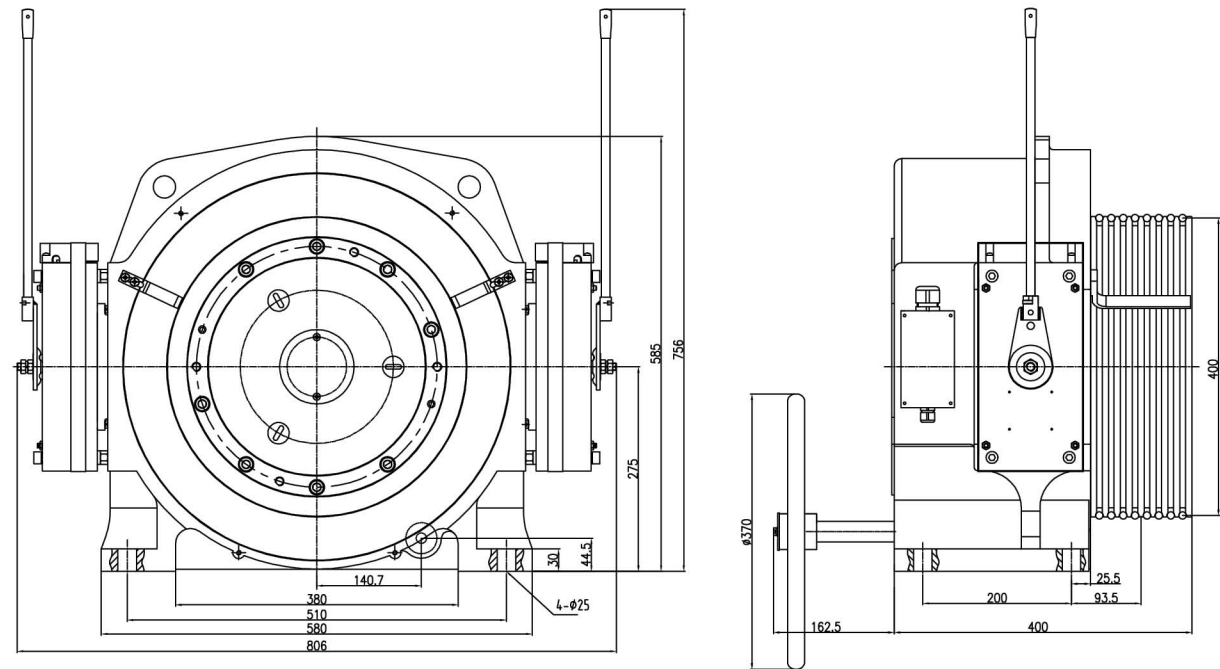


■ TRACTION MACHINE PARAMETER

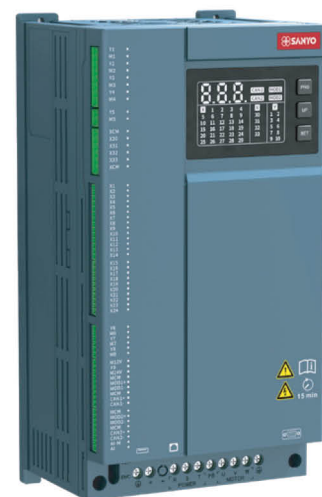
- Capacity 1350kg - 2000kg
- Rated Voltage 380V
- Roping 2:1
- Max Able Load 6000kg
- Rated Speed 1.0m/s - 3.0m/s
- Ins. Class F
- Traction machine pole 32
- Rating S5-40%
- Brake Voltage DC110V

■ FEATURES

- Machine low speed operation smooth, with low noise and small vibration.
- Use block type armless brake with high reliability.
- High power factor, with quick response time and high reliability
- Adapt different inverters, position sensors.
- The braker passed 2 million times braking. After the test, its performance is still in specification. Safety is guaranteed.



Load (kg)	Speed (m/s)	Roping	Motor Parameter					Brake Parameter				Sheave Parameter				
			Rated power (kw)	Rated Torque (N.m)	Rated Speed (RPM)	Rated Frequency (Hz)	Rated Current (A)	Current (A)	Voltage (V)	Rated power (W)	Braking Torque (N.m)	nxd (mm)	Diameter (mm)	Pitch (mm)	β	γ
1350	1	2:1	9	857	96	25.6	19.4	2x1.64	DC110	2x180	≥2x1071	7xΦ10	400	16	95	30
	1.5		13		144	38.4	29.7									
	1.75		15		168	44.8	33.5									
	2		17		192	51.2	38.9									
	2.5		21.5		240	64	49.7					8xΦ10				
1600	1	2:1	10	1050	96	25.6	24	2x1.64	DC110	2x180	≥2x1312	8xΦ10	400	16	95	30
	1.5		15.2		144	38.4	36									
	1.75		18		168	44.8	40									
	2		21		192	51.2	47									
	2.5		26		240	64	59									
1750	1	2:1	11	1148	96	25.6	26.2	2x1.64	DC110	2x180	≥2x1435	8xΦ10	400	16	95	30
	1.5		16.6		144	38.4	39.3									
	1.75		19.7		168	44.8	43.8									
	2		23		192	51.2	51.4									
	2.5		28.4		240	64	64.5									
2000	1	2:1	12.7	1270	96	25.6	29.5	2x1.64	DC110	2x180	≥2x1588	9xΦ10	400	16	95	30
	1.5		19		144	38.4	43									
	1.75		22.2		168	44.8	50.5									
	2		25.5		192	51.2	58									



Witness Excellence Lead the Future of Elevator Drive Control

The SYC-01A series is a new generation of platform-type elevator drive featuring complete functionality and lean integration. We redefine a product model of integrated elevator controller that boasts aesthetics and accurate and reliable elevator drive control performance.

The SYC-01A integrated controller coordinates with the supporting drive control components efficiently. Their combination is applicable to most elevator applications and provides the better flexibility, functionality, and comfort while it complies with new national standards and high quality requirements.

■ FEATURES

Lean integration

- Redefines a product model that integrates drive and control, providing IPXXB protection in compliance with the new national standard.
- Significantly improves the power density and adopts the size design and outlet mode that facilitate deployment of a machine-room-less elevator control cabinet.

Precise drive control

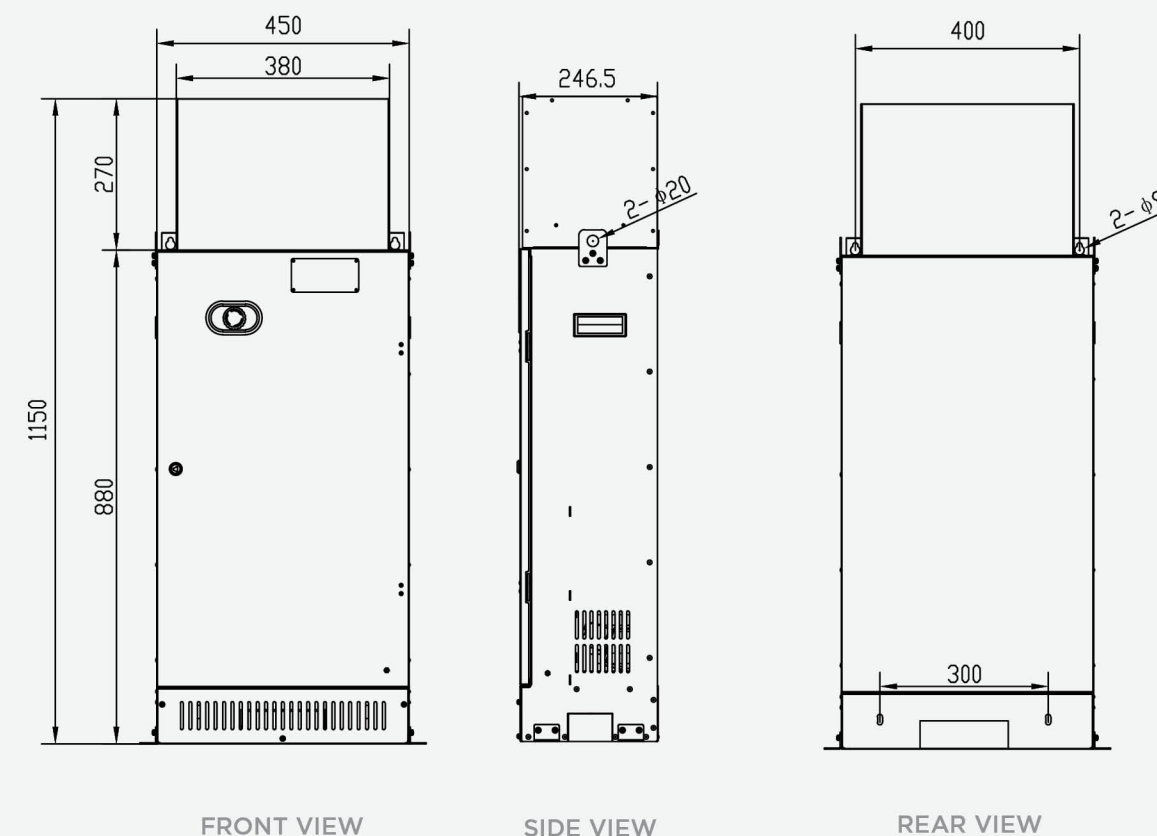
- Adopts leading control algorithms and high-performance drive control chips to make control more precise.
- Supports a high-definition communication encoder to achieve higher resolution and more precise velocity measurement.

Highly-efficient interaction

- Clearly displays the real-time status of input and output points on the LED to facilitate on-site troubleshooting.
- Provides an app for CLI-based commissioning, which displays system status and causes of exceptions in pop-up windows to improve the commissioning efficiency.

Functional safety

- Replaces the RUN contactor with an STO module that features lower cost, smaller size, lower noise, and faster response.
- Replaces the shorting motor stator contactor with a high-speed electronic shorting motor stator at controllable current, without any harm to the motor.





Rated Data

Drive Control Model	Battery Capacity (kVA)	Rated Input Current (A)	Rated Output Current (A)	Rated Output Power (kW)	Applicable Motor (kW)
SYC-L-4005	8.9	14.8	13	5.5	5.5
SYC-L-4007	11	20.5	18	7.5	7.5
SYC-L-4011	17	29	27	11	11
SYC-L-4015	21	36	33	15	15
SYC-L-4018	24	41	39	18.5	18.5
SYC-L-4022	30	49.5	48	22	22
SYC-L-4030	40	62	60	30	30
SYC-L-4037	57	77	75	37	37
SYC-L-4045	69	93	91	45	45
SYC-L-4055	85	113	112	55	55

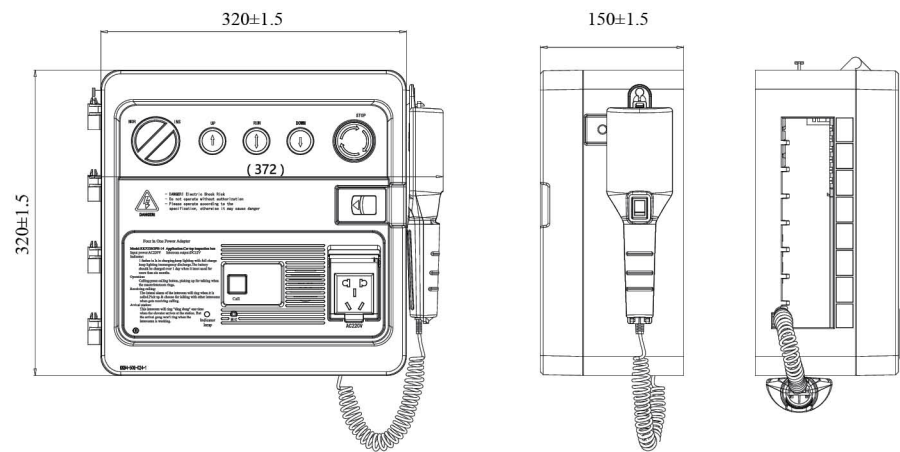
Technical Specifications

Item		Specifications
Input power supply	Input voltage	Three-phase 380 V AC to 440 V AC, 50/60 Hz
	Allowable voltage fluctuation	−15 % to +10 %
	Allowable frequency fluctuation	−5 % to +5 %
Basic features	Maximum number of floors	40
	Elevator running speed	≤ 4.00 m/s
	Commissioning mode	Keypad, operating panel, mobile phone app, and host computer software

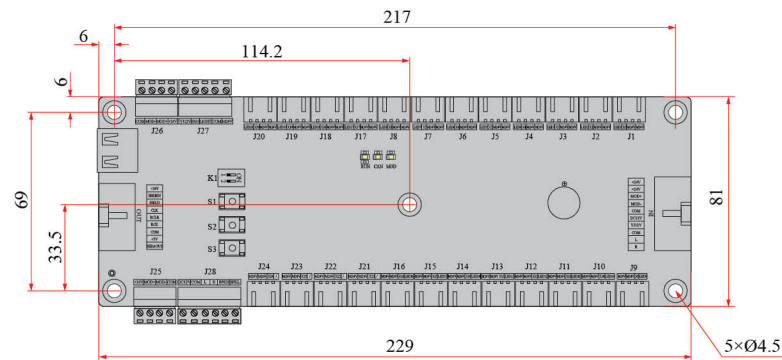


Item		Specifications
Drive features	Maximum frequency	Vector control: 0 Hz to 99 Hz
	Carrier frequency	1.0 kHz to 16 kHzAutomatically adjusted based on load characteristics
	Set resolution of frequency	0.01 Hz
	Control mode	Sensorless vector control (SVC) Feedback vector control (FVC) V/f control
	Starting torque	0.5 Hz/180 % (SVC); 0 Hz/200 % (FVC)
	Speed regulation range	1: 100 (SVC) 1: 1000 (FVC)
	Speed stabilization accuracy	± 0.5 % (SVC) ± 0.05 % (FVC)
	Torque control accuracy	± 5 % (FVC)
	Overload capacity	60 s for 150 % of the rated current; 10 s for 200 % of the rated current
Input/Output signals	Input control power	Rated 24 V DC ± 10 %, input power supply range: 10 V DC to 30 V DC
	Low-voltage digital input	24 inputs, valid range: 10 V DC to 30 V DC
	High-voltage digital input	4 inputs, valid range: 70 V AC to 130 V AC
	Analog input	One input, single-ended or differential, valid range: −10 V to +10 V
	Relay output	Eight outputs, four 5 A 250 V AC outputs and four 5 A 30 V DC outputs
	Applicable power grid	TN/TT
	CAN communication port	Two ports, for communication, parallel or group control of the car top
	RS485 communication port	Two ports, for calling out, cell monitoring or connection to the IoT
	USB port	One port, connected to the Bluetooth module for commissioning with the mobile phone app
	RJ45 port	One port, connected to the operating panel for commissioning
	DB15 port	One port, connected to the sin-cos encoder
	Communication encoder port	One port, connected to the RS485 communication encoder
Environment	Altitude	Below 1000 m (De-rated by 1 % for each additional 100 m higher if the altitude is above 1000 m)
	Ambient temperature	−10°C to +45°C, de-rated by 1.5% for each 1°C higher if the ambient temperature is above 40°C Maximum temperature: +45°C Temperature variation: < 0.5°C/min
	Storage temperature	−20°C to +60°C
	Humidity	< 95% RH, non-condensing
	Vibration	Less than 5.9 m/s² (0.6g)
	Installation environment	Indoor (free of corrosive gas and dust)
	Pollution degree	PD2
	IP rating	IP20
	Protection level	Class I
	Applicable power grid	TN/TT
	Cooling mode	Forced air cooling
	Mounting mode	Cabinet-mounted

Car Top Control Box (KKB4-50G)

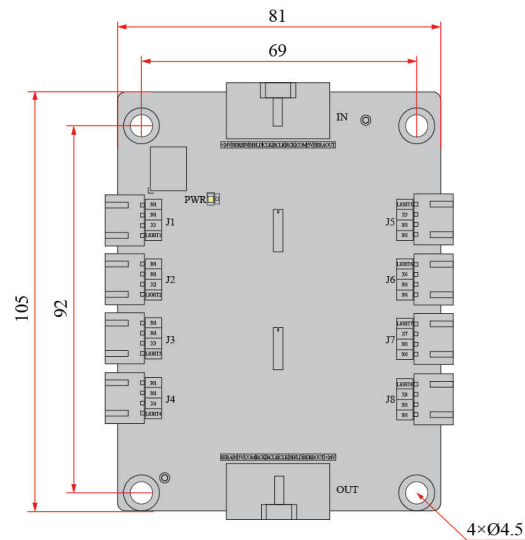


Car Call Board (ANCT-COB-A1)



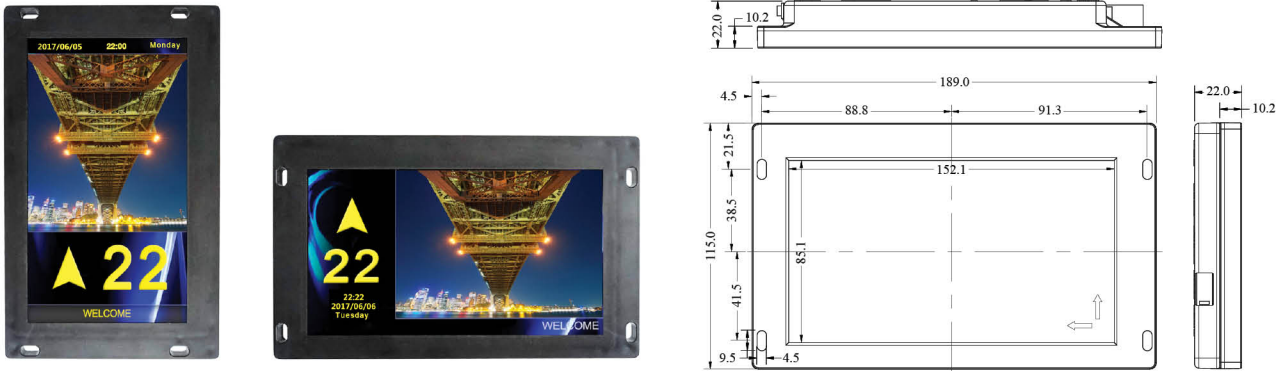
Appearance and size of car call board (unit: mm)

Car Top Interface Board (ANTC-TFC-A1)

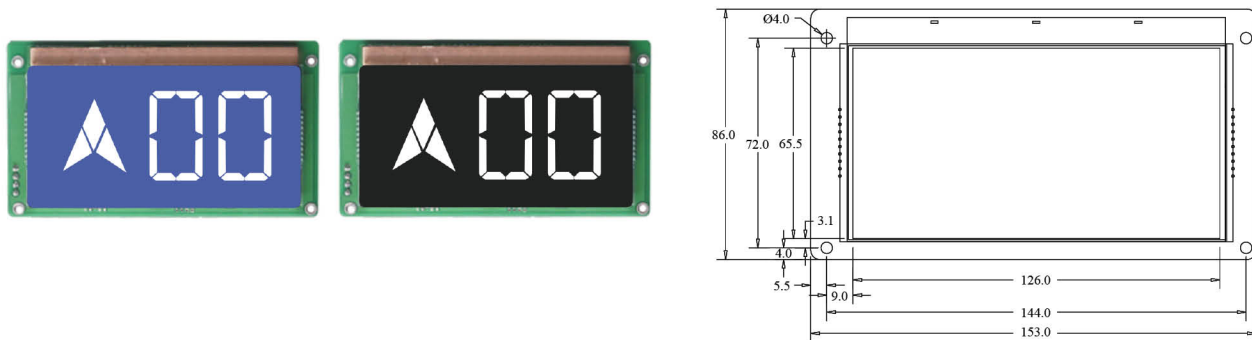


Appearance and size of call extension board (unit: mm)

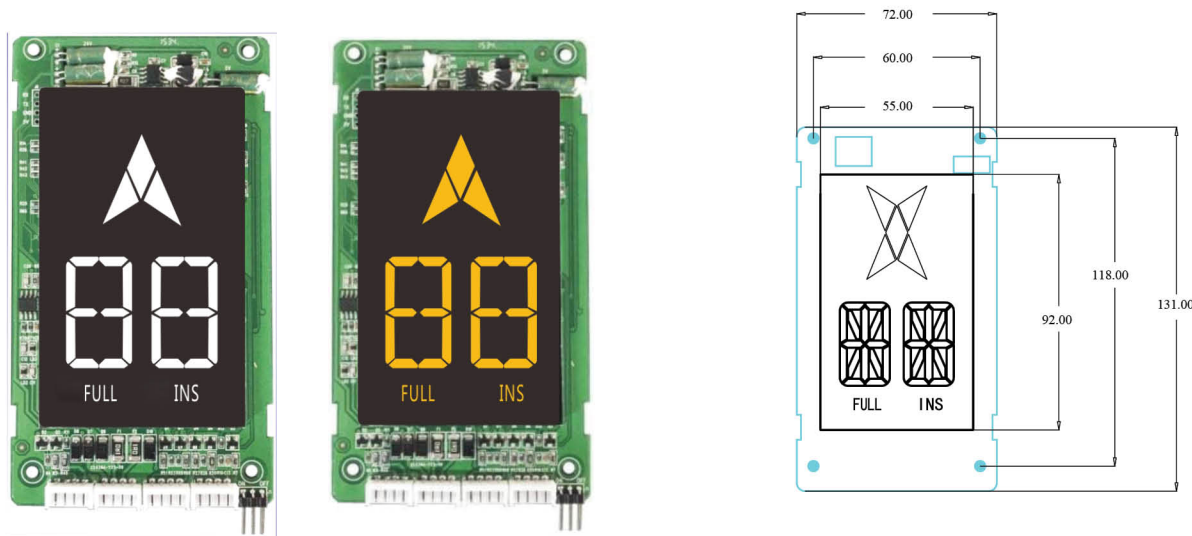
Picture Indicator Board 7.0 Inch (SY-CCB-T7)



Horizontal Indicator Board 5.7 Inch (SY-L5.7-HX)



Indicator Board 4.3 Inch (SY-HCB-05)





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